



INTERNATIONAL PRELIMINARY EXAMINATION REPORT  
(PCT Article 36 and Rule 70)

07 DEC 2004

Applicant's or agent's file reference 21022WO	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)	
International application No. PCT/NL 03/00352	International filing date (day/month/year) 14.05.2003	Priority date (day/month/year) 07.06.2002
International Patent Classification (IPC) or both national classification and IPC C12H1/15		
Applicant DSM IP ASSETS B.V. et al		
<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of sheets.</p>		
<p>3. This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the opinion</p> <p>II <input type="checkbox"/> Priority</p> <p>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p>IV <input type="checkbox"/> Lack of unity of invention</p> <p>V <input checked="" type="checkbox"/> Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI <input type="checkbox"/> Certain documents cited</p> <p>VII <input type="checkbox"/> Certain defects in the international application</p> <p>VIII <input type="checkbox"/> Certain observations on the international application</p>		
Date of submission of the demand  02.12.2003	Date of completion of this report  18.10.2004	
Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized Officer  Koch, J  Telephone No. +31 70 340-4307 	

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. **PCT/NL 03/00352**

**I. Basis of the report**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

**Description, Pages**

1-64 as originally filed

**Claims, Numbers**

1-30 as originally filed

**Drawings, Sheets**

1/2-2/2 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

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5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Yes: Claims	2-22,24
	No: Claims	1,23,25-30
Inventive step (IS)	Yes: Claims	
	No: Claims	1-30
Industrial applicability (IA)	Yes: Claims	1-30
	No: Claims	

2. Citations and explanations

**see separate sheet**

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1. Reference is made to the following documents:

D1: US-A-4532213  
D2: Derwent WPI; AN: 1978-90438A(JP(A) 53127896)  
D3: US-A-5192677  
D4: EP-A-0522428  
D5: US-A-5035902

2. D1 discloses (cf. col. 1, § 1 & 2; claims 1-3) the use of isolated protease (e.g. derived from *Aspergillus niger*) for preventing chill haze in beer and for preparing protein hydrolysates at low pH values.

Similarly, D2 discloses (cf. abstract) acidic protease (e.g. from *Aspergillus niger* / *carborius* / *japonica* / *sojae* / *oryzae*), which is added to wort, fermented wort or beer.

The respective enzymes would apparently exhibit the specificities claimed in claim 1, as they originate from sources such as *Aspergillus niger*, which are disclosed to be suitable in performing the present invention.

The subject-matter of claims 1, 23, 25, 26, 27 and 28 is therefore not novel (Article 33(2) PCT).

3. D3 discloses (cf. col. 5, § 5; abstract) a protease, which is suitable for clarifying beverages such as beer, wine and juices. It appears that the respective beverages can not be distinguished from the products treated according to the invention. The subject-matter of claims 27-30 is therefore not novel (Article 33(2) PCT).
4. D4 discloses (cl. 1, 6, 7; ex. 2) an isolated acidic prolyl endopeptidase. The subject-matter of claim 23 is therefore not novel (Article 33(2) PCT).
5. D5 discloses (cf. example) beer, which has been prepared using proteolytic enzymes. The respective beverages can not be distinguished from the products treated according to the invention. The subject-matter of claims 27 and 28 is therefore not novel (Article 33(2) PCT).
6. Dependent claims 2-22 and 24 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of inventive step, the reasons being as follows:  
In the above claims, slight changes in the methods and the entities of the

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invention are defined, which come within the scope of the customary practice followed by persons skilled in the art, especially as the advantages thus achieved can readily be foreseen. Consequently, the subject-matter of claims 2-22 and 25 also lacks an inventive step.